

Memorandum

To: Anna Krasko, U.S. EPA Remedial Project Manager, L&RR Site

From: Bart Hoskins, U.S. EPA Ecological Risk Assessor



Subject: Ecological risk determinations for the Landfill and Resource Recovery (L&RR) Superfund Site, Operable Unit 2, North Smithfield, RI

Date: September 12, 2018

The purpose of this memorandum is to document the position of the U.S. Environmental Protection Agency (EPA) on ecological risk concerns related to chemicals detected in wetland and stream habitats bordering the L&RR Superfund Site, North Springfield, RI (the Site). Surface water, pore water, and sediment data were collected in Trout Brook and tributary streams, as well as in an upgradient reference area. The purpose of this data collection was to evaluate potential ecological risk associated with discharge of groundwater containing Site contaminants to surface aquatic habitats near the Site. This work was performed to support the Remedial Investigation/Feasibility Study (RI/FS) for the Site. Ecological risks were evaluated in the **Screening Level Ecological Risk Assessment (SLERA) and Refinement, L&RR Superfund Site, OU2, North Smithfield, RI," prepared by Woodward and Curran, June 2017**. In July 2017, Addendum #1 was issued, stating that another addendum would be issued that would include the data from the 2017 sampling round and would be responsive to EPA comments on the June 2017 SLERA and Refinement. Woodward and Curran presented Addendum #2 in late 2017. In response to EPA comments on that document, a revised SLERA was subsequently prepared to further clarify ecological risk conclusions. One of EPA's comments was addressed in a separate document, **Additional SLERA and Refinement Follow-up Resources for USEPA Comment No. 10, June 29, 2018**. An **Interim Final Screening Level Ecological Risk Assessment and Refinement** was subsequently completed and dated September 7, 2018.

(SLERA) and Refinement Report Findings and Conclusions:

Several chemicals, including 1,4-dichlorobenzene, lead, arsenic, and selenium, were detected in sediment and/or pore water at concentrations exceeding ecological risk screening values. A second round of sampling was performed to confirm the presence of these chemicals of potential concern (COPCs), and to assist in determining whether these COPCs pose a risk to ecological receptors in Trout Brook and tributary streams.

The results of the SLERA and Refinement indicated that a subset of COPCs were present at concentrations above effects-based benchmarks, and above reference area concentrations. Most of the benchmark exceedances were localized to the general area of groundwater discharge, in the central portion of the wetland near the confluence with Trout Brook. Some of the constituents (arsenic, selenium, acetone) were not detected in surface water or porewater, therefore the detections in sediment cannot be readily linked to any Site-related source. The small number and localized nature of

exceedances support the conclusion that minimal, if any, potential for population-level ecological risk exists for any on-site ecological receptors. EPA concurs with the conclusion of the SLERA and Refinement document that a baseline ecological risk assessment (BERA) is not required and there is no current indication of ecological risk requiring remedial action.